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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,446	03/03/2005	Naoki Komatsu	P26761	3107
7055	7590	03/27/2006	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191				PHILOGENE, HAISSA
		ART UNIT		PAPER NUMBER
				2828

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/526,446	KOMATSU ET AL.
	Examiner Haissa Philogene	Art Unit 2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 03 March 2005.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-25 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-25 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 03 March 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper, No(s)/Mail Date 6/3/05.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

Figures 49-54 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claim 23 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. As presented, the claim refers to claim 20 to which it is dependent and after "wherein", there is no further limitation.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, line 10, the phraseology "a series connection including at least an inductor" appears to be incomplete, therefore unclear. What element is associated with the inductor to form the series connection? Applicant is required to clarify this matter.

Claims 2-25 are rejected by virtue of their dependencies on the independent claim 1.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art, Figs.49 and 50.

As per claims 1 and 2, Applicant's admitted prior art, Figs.49 and 50, discloses a lighting apparatus of high intensity discharge lamp comprising: a DC power source (1A); a series connection of a first switch Q1 and a second switch Q2; a series connection of a first capacitor C1 and a second capacitor C2 which is connected in parallel with the series connection of the first switch Q1 and the second switch Q2; a series connection (L1, 2, DL, R1) including at least an inductor L1; a high intensity discharge lamp DL connected between a connection point of the first switch Q1 and the second switch Q2 and another connection point of the first capacitor C1 and the second capacitor C2;

a third capacitor C3 connected in parallel with the high intensity discharge lamp DL; and a control circuit (3) for switching on and off of the first switch Q1 and the second switch Q2 so as to supply electric power to the discharge lamp DL. Applicant's admitted prior art further discloses voltages of the capacitors being the same (E/2) while at least the discharge lamp DL has not been lighted (see Fig.50). Applicant's admitted prior art does not disclose a voltage between both terminals of the first capacitor being selected to be different from that of the second capacitor. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ different voltages to the capacitors in lieu of same voltages if they are of different types or sizes to maximize a particular result based on routine experimentation, because it would allow the capacitors to provide two different voltages available for permitting flowing of the inverter current through the switching transistors and at least the lamp, thereby improving the efficiency of the apparatus.

As per claims 18 and 19, Applicant's admitted prior art discloses the claimed invention substantially as explained above and further discloses the DC power source (1A) comprising a rectifier (DB) for rectifying AC current of an AC power source to DC current, and the output voltage from the DC power supply (1A) being inherently varied corresponding to an input voltage Vs from the AC power source and to the voltage between the terminals of the lamp DL since the input voltage can go from 120 Vac to 220-240 Vac depending on the countries.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Bernitz et al., Patent No. 5,739,644.

Applicant's admitted prior art, Fig.49, discloses the claimed invention substantially as explained above. Applicant's admitted prior art further discloses the DC power supply 1A having an output voltage E. Applicant's admitted prior art does discloses the output voltage being in a range from equal to or larger than 300V to equal to or smaller than 480V. Bernitz discloses in Fig.2 a lighting apparatus of HID lamp E having a DC power supply (2) outputting a voltage of 420V. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the 420V as taught by Bernitz into the Applicant's admitted prior art type apparatus, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

***Allowable Subject Matter***

Claims 3-5, 7-17 and 20-25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lathom et al., Patent No. 5,010,279 ; Nagai et al., Patent No. 5,875,107 ; Nerone, Patent No. 6,018,220 ; Nerone, Patent No. 6,459,215; Maehara et al., Patent No. 6,075,715.

***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haissa Philogene whose telephone number is (571) 272-1827. The examiner can normally be reached on 8:30 A.M.-6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MinSun Harvey can be reached on (571)272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hp

Haissa Philogene  
Primary Examiner  
MARCH 2821, 2005